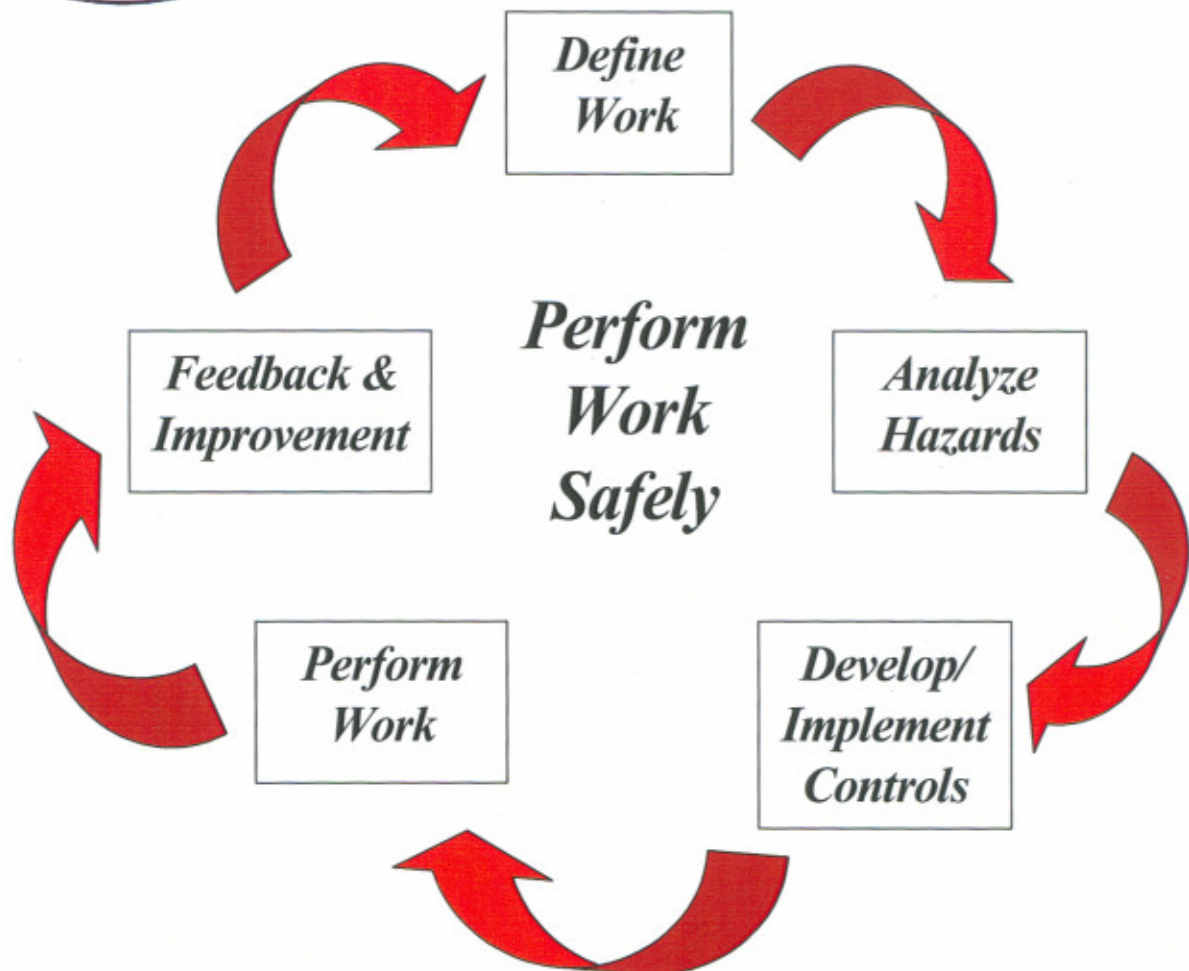# National Nuclear Security Administration
Office of Secure Transportation
Integrated Safety Management
System Description
Revision 1
April 2008

Perform Work Safely

Define Work

Analyze Hazards

Develop/ Implement Controls

Perform Work

Feedback & Improvement

Revision Record

Revision No.	Revision Date	Description
1	April 2008	New Release.

Table of Contents

ACRONYMS

AA	Authorization Agreement
AB	Authorization Basis
ADA	Assistant Deputy Administrator
AEC	Application of Evaluation Criteria
AO	Authorizing Official
AOCC	Agent Operations Central Command
AOEC	Agent Operations Eastern Command
AOWC	Agent Operations Western Command
C2C	Concept to Capability
CFR	Code of Federal Regulations
CMNET	Configuration Management
DBT	Design Basis Threat
DSA	Documented Safety Analysis
DOE	Department of Energy
ES&H	Environment, Safety and Health
ESHB	Environment, Safety and Health Branch
GOGO	Government-Owned, Government-Operated
GP	Guiding Principle
HRRB	Human Reliability and Resources Program
IDP	Individual Development Plan
IRC	Injury Review Council
ISD	Instructional Systems Design
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NMDCCC	Nuclear Material Disposition Consolidation Coordination Committee
NNSA	National Nuclear Security Administration
NESSG	Nuclear Explosive Safety Study Group

ACRONYMS

NESS	Nuclear Explosive Safety Study
OD	Operations Division
OMO	Office of Mission Operations
OPM	Office of Personnel Management
ORM	Operational Risk Management
OST	Office of Secure Transportation
OS	Office of Support
OTL	Office of Training and Logistics
PAP	Performance Assurance Program
PD	Position Description
PDADA	Principal Deputy Assistant Deputy Administrator
POAO	Program Office for Aviation Operation
POPD	Program Office for Planning and Directives
PORA	Program Office for Research and Analysis
QAP	Quality Assurance Program
SBRT	Safety Basis Review Team
SCE	Safety Culture Element
SD	Supplemental Directive
SER	Safety Evaluation Report
SOP	Standard Operating Procedure
SPSD	Safeguards and Personnel Security Division
SSEMD	Safety, Security and Emergency Management Division
SSSP	Site Safeguards and Security Plan
STAAB	Secure Transportation Asset Advisory Board
STSA	Senior Technical Safety Advisor
STSC	Secure Transportation Steering Committee
TDT	Training Development Team
TQP	Technical Qualification Program
TRACOM	Training Command

ACRONYMS

TSR	Technical Safety Requirements
TSS	Transportation Safeguards System
USQ	Unreviewed Safety Question
USQD	Unreviewed Safety Question Determination
VA	Vulnerability Assessment

1.0 INTRODUCTION

The Department of Energy (DOE), National Nuclear Security Administration (NNSA), Office of Secure Transportation (OST) is a government-owned, government-operated (GOGO) organization that manages and performs safe, secure, offsite transportation of:

- Nuclear weapons and components,
- Special nuclear materials,
- Other materials as specified by statute, directive, or competent authority.

OST maintains a specialized work force and associated fleet and communications equipment in a constant state of readiness to respond to normal and emergency duties, and conducts technological and engineering research to improve operations.

OST's Integrated Safety Management System (ISMS) was independently verified in September 2000; OST's initial ISMS description document was issued in November 2000. In the ensuing timeframe OST has undergone several reorganizations, both in terms of their reporting hierarchy (NNSA standup) and internally. As a result, many of OST's primary mechanisms and responsibilities have significantly changed. Many of the mechanisms listed in this document are "in initial implementation stages or draft" at the time of this writing.

The Assistant Deputy Administrator (ADA) is the Authorizing Official (AO) for this document. OST Office Managers are responsible for implementation of Integrated Safety Management (ISM) throughout the OST organization. The ADA has assigned authority to the Manager, Office of Support (OS) for development of ISMS and maintenance of this document.

2.0 PURPOSE

The purpose of this document is to increase awareness and understanding of OST safety management systems at all levels of the organization. In addition, this document is a comprehensive reference of the primary mechanisms that comprise the OST ISM framework. OST expects increased worker awareness and ownership of safety, and improved consistency in managing and evaluating work performance through proper implementation of ISMS.

3.0 SCOPE

The mechanisms and responsibilities described in this document apply to OST organizations performing and/or supporting offsite transportation operations. Support service contractors and subcontractors performing work in OST managed/operated facilities shall be trained to, and comply with the mechanisms described in this document. OST performs Title 10, Code of Federal Regulations (CFR), Part 851 compliance reviews of support service contractors to ensure appropriate worker

protection program requirements are in place.

Contractor services performed for OST in contractor-managed facilities are **not** included in the scope of this document. Contractors performing work for OST in contractor-managed facilities shall comply with approved ISMS specific to their site contract.

4.0 ISMS OVERVIEW

Initially, ISMS was institutionalized by the following regulations and directives:

- Department of Energy Acquisition Regulations (DEAR clauses) (48 CFR 970.5204-2 and 48 CFR 970.5204-78)
- DOE Policy 411.1-1A, *Safety Management Functions, Responsibilities, and Authorities Policy*
- DOE Manual 411.1-1A, *DOE Functions, Responsibilities, and Authorities Manual*
- DOE Policy 450.4, *Safety Management System Policy*
- DOE Guide 450.4-1A, *Integrated Safety Management System Guide*

The majority of these regulations and directives establish the DOE's contractual expectations for contractor ISM. As a GOGO organization, OST operational activities more closely resembled the framework and expectations established for contractors. This drove the decision to adopt the more stringent, detailed, contractor ISM framework and requirements within the OST organization. The OST ISM was independently verified in September 2000 and OST issued their initial ISM document in November 2000.

Subsequent to ISM inception, the DOE significantly revised some of the above directives and issued a new directive (DOE Manual 450.4-1) to initiate the "reinvigoration" of ISM:

- DOE Manual 411.1-1C, *Safety Management Functions, Responsibilities, and Authorities Manual,* requires NNSA organizations to establish and maintain a functions, responsibilities and authorities document.

- DOE Manual 450.4-1, *Integrated Safety Management System Manual*, introduced four new safety culture elements and emphasized integration of Quality Assurance (DOE Order 414.1C), Environmental Protection (DOE Order 450.1), and Emergency Management (DOE Order 151.1C).

NNSA (NA-1) issued the following supplemental directives to provide direction and emphasize ISM reinvigoration for NNSA sites and organizations:

- NA-1 Supplemental Directive (SD) 450.4-1, *Integrated Safety Management System Description*, requires OST to establish and maintain an ISMS description document.

- NA-1 SD 411.1-1C, *NNSA Safety Management Functions, Responsibilities, and Authorities Manual*, defines specific authorities and responsibilities within the NNSA organization.

The infrastructure established by the DOE, and adopted by OST, include:

- The ISMS Objective, *"Perform Work Safely"*,
- The 5 Core Functions,
- The 7 Guiding Principles (GPs), and
- The 4 Supplemental Safety Cultural Elements (SCEs).

The first three GPs apply to all core functions; the remaining four relate to the core functions as illustrated in Figure 2.

FIGURE 1. SAFETY MANAGEMENT SYSTEM

7 GPs	5 Core Functions
1. Line Management Responsibility 2. Clear Roles and Responsibilities 3. Competence Commensurate with Responsibilities	1. Define Scope of Work 2. Analyze Hazards 3. Develop and Implement Controls 4. Perform Work 5. Feedback and Improvement
4. Balanced Priorities	Specific to Core Function 1, Define Scope of Work
5. Identification of Safety Standards 6. Tailored Hazard Controls to Work	Specific to Core Function 3, Develop and Implement Controls
7. Operations Authorization	Specific to Core Function 4, Perform Work

The 4 Supplemental SCEs listed below are used in concert with the 7 GPs and 5 Core Functions:

1. Individual Attitude and Responsibility for Safety
2. Operational Excellence
3. Oversight for Performance Assurance (Core Function 5)
4. Organizational Learning for Performance Improvement (GP 3)

OST considers the first two SCEs to be inherent to all 5 Core Functions and the last two SCEs to be complementary to a specific Core Function or GP.

OST has further refined this framework in terms of their working levels. Figure 2 illustrates the OST working levels within the framework of the 5 Core Functions. Although depicted sequentially, the 5 Core Functions are interdependent functions that

often occur at the same time or continuously. The intent is to perform these functions at all levels of the organization commensurate with the work being performed.

FIGURE 2. OST WORKING LEVELS
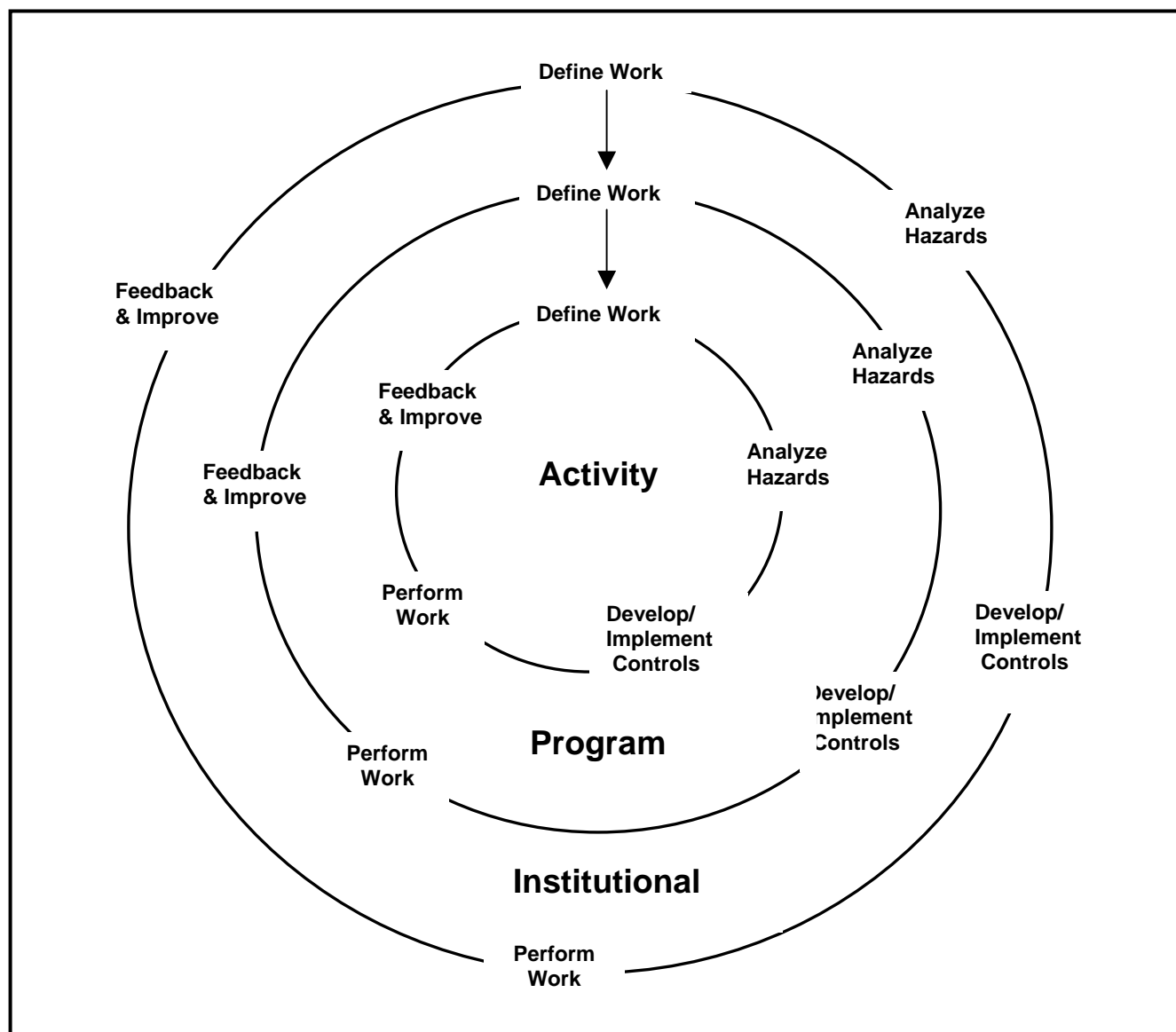
Based on the relationships of the Core Functions and GPs, the SCEs and the OST working levels (Figure 2), the remainder of this document is organized as follows:

- Sections 5.1 – 5.5 document OST's primary mechanisms, responsibilities, and implementation of GPs 1 through 3 (GP 3 and SCE 4 will be addressed together) and SCE 1 and 2. Because these principles are inherent to each process step and are constant at all working levels, the OST mechanisms that satisfy these criteria are best grouped together, thus eliminating redundancy, and improving clarity of this document.

- Sections 5.8 – 5.10 are organized by Core Function and include:

  - The additional GP(s) and/or SCE relating to them.
  - A table identifying the primary mechanism(s) and responsible organization(s).
  - Descriptions of these mechanisms[1], responsibilities, and examples of implementation.

- Section 6.0 describes how OST will monitor ISMS effectiveness and control changes to this document.

- Section 7.0 identifies reference documents used to develop this document or that may provide additional information relative to OST's ISMS.

5.0 OST MECHANISMS, RESPONSIBILITIES, & IMPLEMENTATION

5.1 GP 1, LINE MANAGEMENT RESPONSIBILITY FOR SAFETY
Line Management is directly responsible for the protection of the public, the workers, and the environment.

Primary Mechanisms	Primary Responsibility/Maintained By
DOE Order 461.1A, *Packaging and Transfer or Transportation of Materials of National Security Interest*	ADA/NA-10
OST Policy 7.06, *Integrated Safety Management System*	ADA/Envriornment, Safety and Health Branch (ESHB)
OST Worker Protection Manual	All/ESHB
General Safety Plan	All/ESHB
Safety Performance Elements and Standards	All/Human Reliability and Resources Branch (HRRB)
OST Policy 7.10, *IRC* (draft) and OST SOP 2.00.03, *Injury/Illness Reporting* (draft)	ADA, Managers & Supervisors/ESHB & HRRB

The ADA is the responsible line manager for offsite transportation operations as defined in DOE Order 452.2C, *Safety of Nuclear Explosive Operations* and DOE Order 461.1A, *Packaging and Transfer or Transportation of Materials of National Security Interest*. The ADA is the Approval Authority and the AO for DOE's offsite transportation operations. This authority includes approval of OST's Authorization Agreement (AA),

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[1] OST mechanisms that are classified may be referenced in this document, but will NOT be described in detail. Access to these mechanisms to verify OST ISMS will be on a "NEED TO KNOW" basis only and is subject to the approval of OST management.

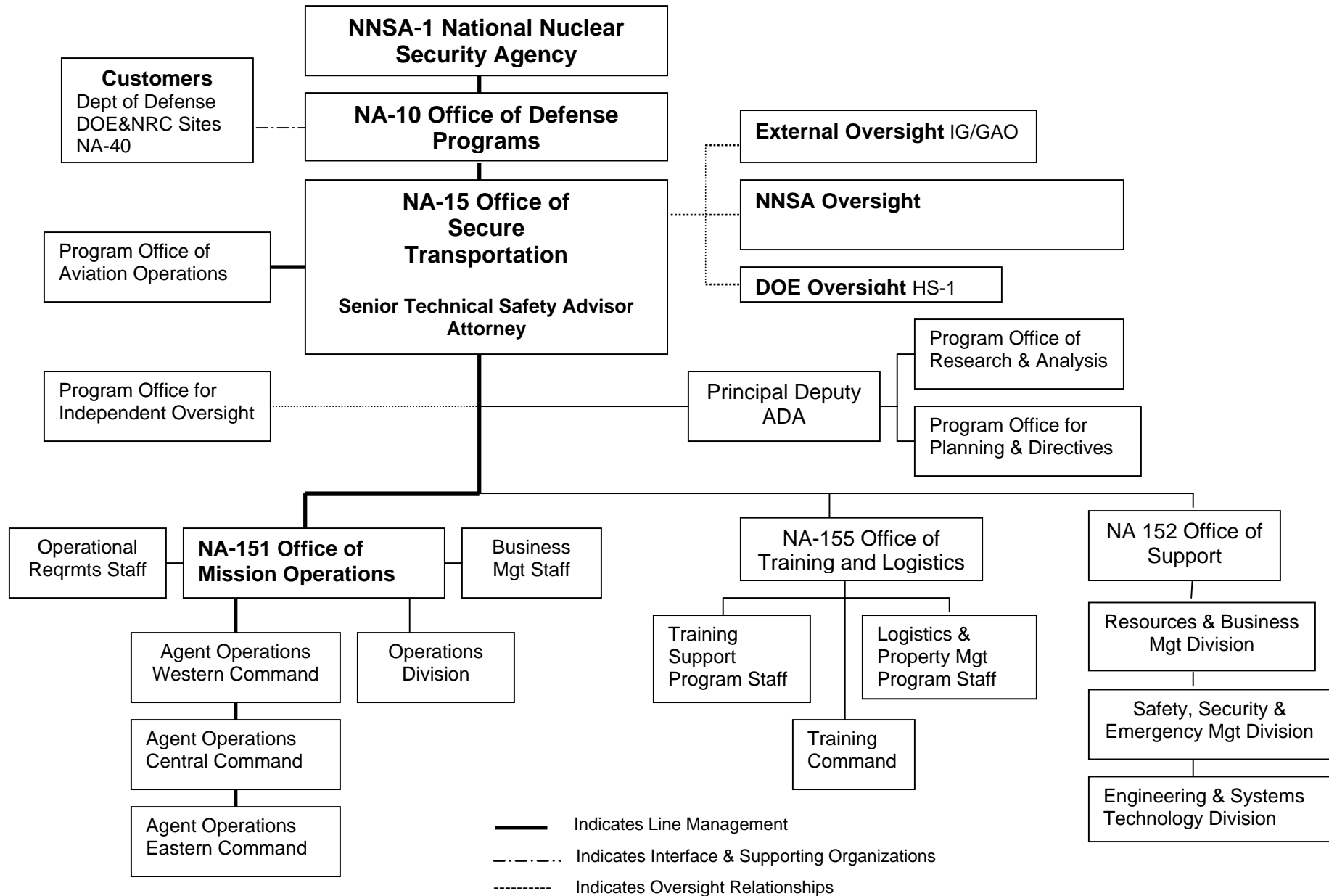Documented Safety Analysis (DSA), and ISM description document.

The OST Worker Protection Manual clearly outlines management authorities and responsibilities for safety as specified by Occupational Safety and Health Administration regulations. OST requires initial and periodic refresher training on safety management authorities and responsibilities.

Although all OST managers and supervisors have responsibility for safety of subordinate personnel; line management responsibility for mission safety rests primarily with OMO (see Figure 3). Line supervisors within OST include the Deputy Director, Office Managers, Division Directors, Branch Chiefs, Unit Commanders, Convoy Commanders, and Squad Commanders. Personnel acting as Lead Instructors, Senior Controllers, and Training Specialists are responsible for the safety of personnel performing work at their direction (such as live fire range activities, or training exercises as described in the General Safety Plan).

The ADA chairs a quarterly Injury Review Council (IRC) meeting. The purpose of these meetings is to review those injuries that are considered significant (severity, recurrence, preventable) and to discuss trends and solutions. During this meeting line managers of injured personnel brief the ADA and senior management on the details of the injury and the appropriateness of corrective action. The objective of these meetings is to decrease injuries through increased management awareness and ownership.

As federal employees, OST line managers' responsibility for safety is established in DOE Orders/NNSA supplemental directives and is further communicated through safety performance elements and standards (Performance Plans). The ADA relies on the established chain-of-command to communicate line management expectations for implementing safe practices, and to ensure work is performed safely.

FIGURE 3. OST LINE MANAGEMENT & ORGANIZATIONAL RELATIONSHIPS

NNSA-1 National Nuclear Security Agency

Customers
Dept of Defense
DOE&NRC Sites
NA-40

NA-10 Office of Defense Programs

External Oversight IG/GAO

NNSA Oversight

NA-15 Office of Secure Transportation

Senior Technical Safety Advisor Attorney

Program Office of Aviation Operations

DOE Oversight HS-1

Program Office of Research & Analysis

Program Office for Independent Oversight

Principal Deputy ADA

Program Office for Planning & Directives

Operational Reqrmts Staff

NA-151 Office of Mission Operations

Business Mgt Staff

NA-155 Office of Training and Logistics

NA 152 Office of Support

Agent Operations Western Command

Operations Division

Training Support Program Staff

Logistics & Property Mgt Program Staff

Resources & Business Mgt Division

Agent Operations Central Command

Training Command

Safety, Security & Emergency Mgt Division

Agent Operations Eastern Command

Engineering & Systems Technology Division

——— Indicates Line Management

—··—··— Indicates Interface & Supporting Organizations

---------- Indicates Oversight Relationships

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5.2   GP 2, CLEAR ROLES AND RESPONSIBILITIES
Clear and unambiguous lines of authority and responsibility for ensuring safety shall be established and maintained at all organizational levels.

Primary Mechanisms	Primary Responsibility/Maintained By
OST 1120s, *Functions, Responsibilities and Authorities*	OST Managers & Supervisors/HRRB
QA-5, Issue D, *NNSA/OST Quality Assurance Program*	All/POIO
OST Position Descriptions (PDs)	OST Managers &Supervisors
OST Policy 1.08A *Memorandums of Agreement and Memorandums of Understanding*	ADA/OMO & OTL

Individual roles and responsibilities are documented in PDs. The process for classifying PDs is regulated by Title 5, CFR, Part 511, documented in DOE Order 325.1, and further described in Office of Personnel Management (OPM) standards, handbook, and operating manual. OST staff develops PDs with assistance from the HRRB. PDs are then coordinated with the NNSA Service Center, Human Capital Division.

OST has clarified and documented their relationships with customer organizations and other federal agencies, state and local law enforcement in a Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA); copies of approved MOU/MOAs are maintained on the OST-Website.

OST roles and responsibilities are comprehensively described in OST 1120s, *Functional Statements*, QA-5, *NNSA/OST Quality Assurance Program* (QAP). Specific roles and responsibilities are described in OST policies, procedures and manuals. A brief overview of organizational responsibilities is provided below:

- The OST Senior Technical Safety Advisor (STSA) and the OST Attorney report directly to the ADA. These individuals are responsible for advising the ADA and providing interpretations/guidance to the OST organization.

- There are four Program Offices; two report directly to the ADA and two report to the Principal Deputy Assistant Deputy Administrator (PDADA). They are respectively:

  - Program Office for Aviation Operations (POAO) is responsible for performing Joint Technical Operations Team and Accident Response Group air mission and for providing safe, secure air movement of national security materials and mission support transport (Federal Agents and equipment).

- ▪ Program Office for Independent Oversight is responsible for the OST Performance Assurance Plan, conducting evaluations, investigations, and surveys, and for administering the OST QAP.

- ▪ Program Office for Research and Analysis (PORA) is responsible for collecting, compiling, analyzing, and disseminating intelligence data pertinent to the success of the OST mission.

- ▪ Program Office for Planning and Directives (POPD) is responsible for coordinating directives information (DOE and NNSA), processing of internal OST directives, and for administering the OST self-assessment program.

- ▪ OMO Agent Operations Commands transport weapons, weapon components, special nuclear material and other materials of national security interest in the Transportation Safeguards System (TSS). Other functions performed by OMO include strategic planning and performance measurement, scheduling, customer interface, agency liaison, and management of the Transportation Emergency Communication Center.

- ▪ OS is responsible for performing administrative functions (such as facilities management, work planning and control, human reliability and resources, and acquisitions), and for providing safety, security, emergency management, engineering and cyber support.

- ▪ Office of Training and Logistics (OTL) is responsible for curriculum development, technical advice, and support of training and testing activities. OTL manages the Training Command (TRACOM) at Fort Chaffee, AR. TRACOM is the primary location for Agent Candidate Training, logistics and supply operations, and training branch instructional staff (Operational Readiness Training and Special Response Force).

5.3   GP 3, COMPETENCE COMMENSURATE WITH RESPONSIBILITY AND SCE 4, ORGANIZATIONAL LEARNING FOR PERFORMANCE IMPROVEMENT

GP 3: Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities.

SCE 4: The organization demonstrates excellence in performance monitoring, problem analysis, solution planning, and solution implementation. The organization encourages openness and trust, and cultivates a continuous learning environment.

Primary Mechanisms	Primary Responsibility/Maintained By
OST Annex Order 470.4-3, *Federal Agent Protective Force Program (Draft)*	All OST/OMO & SB
OST Federal Agent Education and Training Plan	OMO/OTL

Primary Mechanisms	Primary Responsibility/Maintained By
OST Training Playbook	All/PDADA & OTL
OST Policy 4.04A, *Employment Requirements for Federal Agents (Nuclear Material Couriers)*	OMO/HRRB
OST Policy 1.42, *Professional Development Shadowing Program*	ADA/OTL
Leadership Training	All/OTL
Executive Potential Program	OST Managers & Supervisors/HC-21
OST Individual Development Plans (IDPs)	OST Managers & Supervisors/OTL

Specific prerequisite job skill requirements are documented in PDs. PDs are posted to allow qualified personnel an opportunity to fill the position. A selection panel conducts interviews of individuals who meet the minimum qualification level; the selection official makes the final determination.   Subsequent to employment, DOE managers, supervisors, and employees are required to develop and maintain current IDPs. These plans are used as an input to determine critical training needs on an annual basis.

OST has established specific employment requirements for Federal Agents in OST Policy 4.04 and the *Federal Agent Education and Training Plan*. These documents prescribe initial skills for Federal Agents and the duties and capabilities for their succession. OST has also developed a DOE 470.4-3 Annex (draft) that tailors protective force training requirements to better align with OST mission and priorities.

OST has developed the OST Training Playbook to meet OST mission-specific requirements. The program is based on OST's operational philosophy, "Active Security Doctrine." The foundation of the program is the identification and analysis of the most credible threat scenarios, the critical task list and the essential elements/components. The training objective is to focus on realistically evaluated training and validation using a process of task, condition, and standards as the metric for measurement.

OST personnel with significant safety responsibilities are part of the Technical Qualification Program[2] (TQP). Personnel fulfilling these positions are held responsible for pursuing and completing their specified qualifications. OST employees receive initial and refresher training as required by various DOE directives in safety, security, equal employment Opportunity and diversity, and sexual harassment. OST has initiated internal policies to promote succession and advanced career paths.

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[2] In response to the Defense Nuclear Facilities Safety Board recommendation 93-3, DOE developed the TQP. The program applies to DOE employees holding technical job positions (primarily science and engineering categories).

5.4 SCE 1, INDIVIDUAL ATTITUDE AND RESPONSIBILITY FOR SAFETY

Every individual accepts responsibility for safe mission performance. Individuals demonstrate a questioning attitude by challenging assumptions, investigating anomalies, and considering potential adverse consequences of planned actions. All employees are mindful of work conditions that may impact safety, and assist each other in preventing unsafe acts or behaviors.

Primary Mechanisms	Primary Responsibility/Maintained By
OST Worker Protection Manual	All/ESHB
Safety Performance Elements and Standards	All/HRRB
OST SOP 7.00.07, *Safety Award Program*	All/ESHB
OST Policy 1.05, *Hazard Concern Reporting Program and* OST SOP 7.00.08, *Hazard/Concern Reporting Program (Draft)*	All/ESHB
OMO Mission Needs Statement (internal process)	OMO/OMO

The *OST Worker Protection Manual* describes employee rights and responsibilities for safety. OST personnel receive initial and periodic refresher training to remind them of their individual authorities to identify and stop unsafe practices without fear of reprisal.

OST has developed internal policies to encourage individuals to identify and report unsafe conditions and operational concerns. One of the newer mechanisms, safety awards, provides incentives for employees to own and contribute to safety programs and processes. This program applies a "graded approach" for recognizing employee contributions. Incentives will be awarded based on inputs to the Hazard/Concerns program as well as supervisor or peer-nominated based on individual performance to the safety performance elements and standards.

OMO has an internal process by which Federal Agents can submit proposals and suggestions for safety and operational improvements (mission needs statement). This process allows individuals to identify various deficiencies and make recommendations. The process includes a discussion of the current process or equipment and the rationale/benefit of the improvement. Many of these suggestions and proposals have had a positive impact on safety-related issues (processes, equipment). The safety award program will provide a means of recognizing these individuals for their contributions.

5.5 SCE 2, OPERATIONAL EXCELLENCE

Organizations achieve sustained, high levels of operational performance, encompassing all DOE and contractor activities to meet mission, safety, productivity, quality, environmental, and other objectives. High-reliability is achieved through a focus on

operations, conservative decision-making, open communications, deference to expertise, and systematic approaches to eliminate or mitigate error-likely situations.

Primary Mechanisms	Primary Responsibility/Maintained By
OST Policy 5.09, *Reconnaissance and Surveillance*	OMO/PORA
OST Training Playbook	All/PDADA & OTL
Application of Evaluation Criteria (AEC) - initial mechanism	ADA/POIO
OST Training Standard Operating Procedure (SOP)	All/OTL
OST Policy 7.07, *Operational Risk Management* (ORM) and *ORM Manual*	All/ESHB

OST missions are predicated on real-time threat information. PORA is responsible for collecting, compiling, and analyzing data for actual and potential adverse conditions. This information is provided to the appropriate Convoy Commander who considers the information during trip planning. This may include dispatch of a reconnaissance/surveillance team to further determine significance of the condition and recommendations for avoiding or managing the situation. Examples may include choosing alternate routes to avoid unstable bridges, traffic delays, or areas with reported suspicious activities.

The OST Training Playbook and associated tools are designed to train, monitor, and measure human performance to mission critical tasks. POIO has developed the AEC as a means to measure successful performance. Resulting performance is reported in a matrix as "Go, No-Go, or Unobserved." The AEC includes a "substitution-like" test to ensure the evaluator understands the reactions of the trainee and factors this rationale into the final evaluation. Evaluation results are provided to the entities (organizations/individuals) that were observed; entities are responsible for making the final performance determination, "Trained, Partially Trained, or Untrained." The final determinations are discussed in an After Action Review to validate their accuracy and recorded in a database.

Follow-on training for weak performance areas is performed and re-evaluated for improvement (process is repeated). The ADA may assign special focus teams to improve training quality depending on the significance and cause of the performance weakness.

Prior to conducting training and exercise activities, OST convenes Training Development Teams (TDTs). TDTs are generally led by the Lead Instructor or Senior Controller for the event and attended by operational and support staff. The objective of

TDTs is early identification of issues (potential and actual) caused by the proposed activity. Additionally, members of the TDT attend site surveys to identify location-specific hazards and/or concerns that could have a negative impact. These issues and concerns are discussed and resolved within the team or elevated to upper management for acceptance/resolution.

5.6   CF 1, DEFINE SCOPE OF WORK AND GP 4, BALANCED PRIORITIES

CF 1: Missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated.

GP 4: Resources shall be effectively allocated to address safety, programmatic, and operational considerations. Protecting the public, the workers, and the environment is a priority whenever activities are planned and performed.

Primary Mechanisms	Primary Responsibility/Maintained By
DOE/NA-0010, *NNSA Strategic Plan, Section C. Administrators Areas of Special Emphasis, Providing Secure Transportation of NNSA and DOE Materials*	NA-1, NA-10, & ADA/NA-1
DOE Order 461.1A, *Packaging and Transfer or Transportation of Materials of National Security Interest*	ADA/NA-10
BOP-001 (series) on *Planning Programming, Budgeting and Evaluation*	ADA & Strategy and Project Managers/NA-1
OST Policy 1.36, *Project Management Program*	ADA/Headquarters Liaison Office (HLO)
OST Policy 1.06B, *M&O Contractor Task Agreement*	ADA & Strategy and Project Managers/RBMD
OST Policy 1.25A, *Acquisition Policy* and *Acquisition and Procurement Manual*	All Requestors/RBMD
Predictable Mission Schedule	OMO/Operations Division (OD)
Training Activity Calendar	OTL/TRACOM

Requirements for work planning and budget cycles are established in NNSA Policy Letters (Basic Operating Procedures) and further defined in OST internal Policies and work instructions (as referenced above). OST projects are electronically entered and tracked using the Enterprise Project Structure. Project plans are used to justify OST's input to the NNSA Future Years Nuclear Security Program.

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OST mission priorities are established in the DOE/NA-0010 NNSA Strategic Plan. The specific process for accessing/utilizing the TSS is documented in DOE Order 461.1A. Customer sites requiring OST support are required to submit annual 10-year projection schedules and quarterly two-year detailed projection schedules to the Secure Transportation Steering Committee (STSC). The STSC reviews shipment forecasts and recommends prioritization to the Secure Transportation Asset Advisory Board (STAAB); an NNSA senior management group chaired by the NA-10 Principal Deputy Administrator.

Customer sites generate Transportation Commitment Requests three-months in advance of the expected shipping date. The OD uses this information to generate a Predictable Mission Schedule. OMO uses calendar and graphic displays to illustrate number of shipments and available resources by unit. OST is required to maintain an 80% efficiency rate (Federal Agents, equipment) for conducting mission shipments.

The OMO Strategic Program Planning Manager (part of the OMO Business Management Staff) monitors, complies, and analyzes near and long-term information and provides performance feedback to the STSC and the STAAB. This information includes (but is not limited to) comparison of shipper forecasts to actual and OST performance metrics (80% capacity). The mechanism used for reporting is described in the Milestone Reporting Tool. OST is required to submit specific metrics[3] to NA-10; these metrics are forwarded to the OPM.

Currently, the STAAB has formed the Nuclear Material Disposition Consolidation Coordination Committee (NMDCCC). The NMDCCC has further tasked business development groups to study variables and options for Complex Transformation. OST provides input to these business groups on secure transportation assets and impacts.

In order to achieve a more efficient, effective, secure transportation mission, OST reanalyzed their operational philosophy. OST's current operational philosophy is to be an operationally focused, intelligence-driven operation "Active Security Doctrine."

This philosophy focuses on a "threat based" doctrine and is implemented to:

- Develop an intelligence capability driven by priority intelligence requirements and named areas of interest.
- Develop and resource "habits of action" and "habits of thought" that are focused on Active Security (i.e. detect, deter, disrupt, defend, recapture, and recover).
- Acknowledge the "human dimension."
- Include realistically evaluated training and validation based on the "intent" of the Design Basis Threat (DBT) policy using a process of task, condition, and standards as the metric for measurement.

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[3] Current metrics include an accounting of "convoy equivalents performed by month" and "cost of convoy per shipment." These metrics are under review and subject to change.

The OST Active Security doctrine contains five Essential System Elements/Components:

- Execute Intelligence Cycle
- Operational Security
- Conduct Command & Control/Emergency Management
- Federal Agent Protective Force
- Physical Security Systems

These five elements represent the cornerstone of OST's doctrine for remaining unpredictable; forcing the threat into patterns of activity; focusing resources, training and operations on developing an Active Security doctrine to detect, deter, deny and evade; and sustainment of brilliance in the basics to defend, recapture and recover.

5.7   CF 2, ANALYZE HAZARDS
Hazards associated with the work are identified, analyzed, and categorized.

Primary Mechanisms	*Primary Responsibility/Maintained By*
10 CFR 830, DOE-STD-3009-94, and OST 46XA Manual Chapters	ADA & STSA/ESHB
OST SOP X.XX.XX, *Vulnerability Assessment (VA) and Site Safeguards and Security Plan (SSSP) Management Process* (Draft)	ADA & OMO/SB
OST Policy 5.08, *Dissemination of Domestic Threat Information*	OMO/PORA
OST Policy 7.07, *ORM* and *ORM Manual*	OMO & OTL/ESHB

OST analyzes hazards associated with conducting shipments, primarily focused on safeguarding material in their custody, from point of acceptance until custodial transfer is accomplished.[4]   Analysis activities required to execute OST work include transportation (route, conveyance, and restraint systems) threat and vulnerability, and worker hazards (training, handling of firearms and use of other hazardous equipment). The methods for performing analyses for these areas are prescribed in different DOE Orders and therefore vary slightly in their approach; but include the following fundamental steps:

- Identification of activities,

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[4] Hazard analyses associated with the cargo and packaging are performed by the requesting customer organizations and subsequently reviewed by the Nuclear Explosive Safety Program organization and the Transportation Safety Review Panel. See DOE Orders 452.2C and 461.1A.

- Analysis/Assessment of risks (event scenarios, consequences of these events, and probability that those events will occur), and
- Development and implementation of preventive and mitigative controls.

While these analyses are complementary, the focus is slightly different. For example, the transportation analysis focuses on protecting the public and environment during offsite transport, but considers the affect of well-trained workers on preventing or mitigating events. Threat and vulnerability analyses address potential sabotage and terrorist hazards to the transport, which in turn, protect the public and the environment. Worker safety analyses targets potential hazards encountered during the performance of, and training for, worker activities, which is based on the events postulated in the other analyses and the worker response to those events. The following sections provide further information on each analysis and the process and methods employed to perform them.

5.7.1 OffSite Transportation Authorization Basis (AB)

The process for documenting the OST DSA is compliant with 10 CFR 830 (DOE-STD-3009-94 guidance) and is further detailed in OST 46XA Manual Chapters. The cycle for developing and maintaining the OST DSA is ongoing. When there are significant changes to the DSA, the ESHB will request the OST STSA initiate/convene a Safety Basis Review Team (SBRT).

The STSA initiates and leads a multi-disciplinary SBRT; the SBRT is responsible for preparing the SBRT Plan and a Safety Evaluation Report (SER). The SER is forwarded to the Approval Authority[5] who either accepts the operating risks by approving the AB documents, or directs rework. During this review and approval period, OST begins preparation of the Single Integrated Input Document for submittal to the Nuclear Explosive Safety Study Group (NESSG). The NESSG is initiated by the Approval Authority, and is tasked to provide a Nuclear Explosive Safety Study (NESS).

Subsequent to Approval Authority approval of the AB documents, OST provides a comprehensive briefing to the NESSG. The briefing includes (but is not limited to) descriptions/details relative to:

- Security (determent systems, practices, weapons, etc.)
- Training
- Design
- Calculations
- Management Programs
- Analysis Methods
- Change Control and Unreviewed Safety Questions (USQs)
- Resolution of prior NESS findings (as applicable)

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[5] The Approval Authority for the OST AB is the ADA.

The NESSG performs their evaluation, prepares the NESS, and transmits it to the ADA. During this evaluation period, OST prepares the AA and performs any readiness assessments[6] that may be required. Subsequent to ADA acceptance of the NESS, the STSA submits the AA, along with readiness assessment information (as applicable) to the ADA. The approved AA describes the operational scope, terms, limits, and conditions.

5.7.2 Threat and VA

The VA/SSSP Program Manager is responsible for managing the overall VA/SSSP program. The program is based on identification and evaluation of the most credible and/or most likely scenarios depicting a broad range of adversary attack objectives and methods.

Representative case scenarios are developed by a multi-disciplined team (Red Team) consisting of internal and external Subject Matter Advisors, with comprehensive tactical and technical backgrounds necessary to support analysis and development of credible adversary attack plans.

The Red Team completed a structured and intellectually honest analysis of the strengths and weaknesses of the terrorist adversary postulated in DOE Order 470.3A, Design Basis Threat (2005 DBT), and the OST Adversary Threat Spectrum scenarios, which is based on the Adversary Course of Action analysis conducted in 2007.

PORA gathers "real-time" threat information from various sources and evaluates its potential impact to upcoming missions. This information and accompanying recommendation is provided to the appropriate Convoy Commander who, in turn, determines the best course of action to prevent or mitigate consequence of the identified threat. Examples may include heavy construction, unstable structures (such as bridges), and heavy concentrations of activists or civil unrest.

5.7.3 Worker Hazards Analysis

OST Policy 1.08, *ORM* and associated manual prescribes the process for performing risk assessments. The risk assessment is a comprehensive identification of the hazards associated with the specific operation/activity (from simple to complex). OST documents formal risk assessments in Lesson and Exercise Plans (activity specific), Site-Specific Safety Plans (location specific) as well as day-of-execution (time and condition specific).

Additionally, the risk assessment includes controls and measures (engineered, administrative, and protective equipment) to be taken to prevent/mitigate consequences.

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[6] Readiness assessments may be performed at the direction of the Approval Authority; the need to perform these assessments is contingent upon significant modifications to offsite transportation operations or a result of a significant incident or series of near-misses.

ESHB is responsible for performing site-specific preliminary hazard and risk assessments; these are documented in the Site-Specific Safety Plan. First line supervisors (such as Lead Instructors, Senior Controllers, and Convoy Commanders) are responsible for performing and documenting activity and daily risk assessments. Activity and daily risk assessments are reviewed by ESHB for quality and consistency.

5.8 CF 3, DEVELOP AND IMPLEMENT CONTROLS; GP 5, IDENTIFICATION OF SAFETY STANDARDS AND REQUIREMENTS, AND GP 6 HAZARD CONTROLS TAILORED TO WORK BEING PERFORMED

CF 3: Applicable standards and requirements are identified and agreed-upon, controls to prevent/mitigate hazards are identified, the safety envelope is established, and controls are implemented.

GP 5: Before work is performed, the associated hazards shall be evaluated and an agreed-upon set of safety standards and requirements shall be established which, if properly implemented, will provide adequate assurance that the public, the workers, and the environment are protected from adverse consequences.

GP6: Administrative and engineering controls to prevent and mitigate hazards shall be tailored to the work being performed and associated hazards.

Primary Mechanisms	*Primary Responsibility/Maintained By*
OST Policy 1.34, *OST Directives System* and OST SOP 1.00.01, *Control of OST Directives System Documents*	All/POPD
OST Policy 1.20A, *DOE/NNSA Directives Review Program*	Division Directors/POPD
OST 46XA Manual Chapters and DSA	ADA & OMO/ESHB
Federal Agent SOP	OMO/OMO
ORM Manual	All/ESHB
OST SOP 7.00.06, *Safety Plans Standard Operating Procedure*	ESHB/ESHB

Federal regulations, DOE and NNSA directives (Policies, Notices, Orders, Guides and Manuals) and Department of Defense directives form the basis for OST controls. As a NNSA organization, OST is expected to comply with applicable directives and executive orders until such time that the order or directive has been rescinded, cancelled, or replaced or unless an exemption, waiver, deviation, or exception has been granted. These documents prescribe requirements and controls that are further promulgated by OST Policies, Notices, SOPs, and Manuals.

The POPD receives notices of modifications to existing standards and development/issuance of new standards. The POPD communicates/coordinates standard information with the other OST Divisions, who in turn, assign appropriate personnel to take action (review/comment and/or generate internal directives). OST does not generate additional documents if adequate detail exists in other directives or standards to enable implementation.

OST flows down applicable environment safety and health (ES&H) standards and requirements to supporting contractors via their contracts. The contractors respond by submitting the required program plans, documents, etc. or by providing an implementation plan to achieve compliance. Submittals are reviewed using 10 CFR 851, *Worker Protection Program* guidance and criteria.

Specific controls for offsite transportation operations are documented in the Transportation Safety Analysis Report. These controls include:

- SafeGuards Transporters
- Cargo & Tiedowns
- Specific features of the Federal Agent SOP

Bounded by Technical Safety Requirements (TSRs)

- Other defense-in-depth programs include, but are not limited to:

    - ISMS Mechanisms
    - Maintenance Program
    - Configuration Management (CMNET) Program
    - QAP
    - Training Program

The controls that are bounded by TSRs rely on the discipline and rigor associated with the OST Unreviewed Safety Question Determination (USQD) process, Concept to Capability (C2C), CMNET Program. The CMNET is an electronic system designed to provide "cradle-to-grave" control of any changes to the Federal Agent SOP and equipment and/or systems (tractors, trailers, electronic systems, determent systems, and communication systems).

Other controls unique to OST include the Emergency Management Program Plan, which is tailored to reflect actions and requirements applicable to a mobile (not fixed site) emergency. This Program Plan establishes the responsibilities and actions for responding to a transportation event, including notifications, interfaces, and timeframes. Emergency management for the various OST geographic locations is documented in the host site plans and is specific to the emergency response teams and resources resident at the site.

OST security controls have a significant impact on OST operations and take precedence over safety in certain emergency situations. Some security controls contribute to the safety of the operation by addressing hazards and vulnerabilities

associated with physical systems, personnel, operational practices, and information control. Security controls are tailored specific to the site and/or operation and are documented in the SSSP (classified), and Site Security Plans.

OST has a QAP that meets the requirements of DOE Order 414.1A as required by DOE Order 452.2A. This QAP includes descriptions of organizational roles and responsibilities and establishes minimum quality requirements for the 10 criterion established in DOE Order 414.1A.

The *Worker Protection Program Manual* establishes specific manager and worker safety responsibilities and rights, as well as minimum requirements in the following areas:

- Office Safety
- Radiation Protection
- Firearms Safety
- Motor Vehicle Safety
- Explosives Safety
- Industrial Safety
- Industrial Hygiene
- Respiratory Protection

The contents of the Worker Protection Program represent the majority of basic worker safety controls; these controls are further implemented in operations through the development of Policies, Procedures, Manuals, and via ORM in Exercise and Lesson Plans and Site-Specific Safety Plans.

Controls for training are documented in the OST Training SOP and the OST Curriculum SOP and are based on the Instructional Systems Design (ISD) process (see Section 5.3). The ISD process is similar and compatible with the core functions of ISM. The process provides criteria and instructions for the development, analysis/review, approval, execution, and continuous improvement of training plans.

5.9 CF 4, PERFORM WORK AND GP 7, OPERATIONS ARE AUTHORIZED

CF 4: Readiness is confirmed and work is performed safely.

GP 7: The conditions and requirements to be satisfied for operations to be initiated and conducted shall be clearly established and agreed upon.

Primary Mechanisms	Primary Responsibilities
OST AA	ADA/ESHB
OST Policy 5.09, *Reconnaissance and Surveillance*	OMO/OD
OST Federal Agent SOP (classified)	OMO/OD
OST SOP 7.00.04A, *Readiness Confirmation for OST Training/Testing*	OTL & OMO/ESHB

OST performs readiness activities at all levels of the organization. Formality of readiness activities is commensurate with the level of hazard associated with work performed in these areas.

The ADA is the AO for offsite transportation operations. OST has an approved AA that outlines the terms, conditions, and minimum requirements for mission operations. The ADA and STSA ensure that requests for OST services that have the potential to be outside the approved AB are reviewed per the USQD process.

Operational missions may be preceded by a reconnaissance/surveillance team based on information collected during mission planning. This team evaluates the significance of the threat information and provides feedback and recommendations to the Convoy Commander to avoid unnecessary risks.

Federal Agents perform readiness activities prior to conducting offsite transportation operations. The Federal Agent SOP (classified) provides specific instructions and checklists to be used. Convoy Commanders are responsible for ensuring certain controls specified by the Federal Agent SOP are in place and maintained during offsite transportation operations, such as appropriate tie-downs, speed limit, driving conditions, and drive times.

The ETSD staff provides specific guidance and direction to contractors that maintain OST mission essential operational equipment. This guidance and direction includes specific readiness actions prior to returning a vehicle to the ready line. Specific examples include brake tests, tire pressure, engine readouts, oil/gas, gauges, lights, and other engineered systems.

Site-specific safety plans prescribe the controls and readiness actions to be taken to ensure controls are in place prior to, and maintained during, training and testing activities. Examples may include range or course walk-downs, verification of target placements, hazard removal or marking, availability and condition of personal protective equipment. The responsible line manager (such as the Lead Instructor, Senior Controller) are responsible for performing readiness activities; ESHB staff assists and advises in these activities.

5.10 CF 5, FEEDBACK AND IMPROVEMENT AND SCE 3, OVERSIGHT FOR PERFORMANCE ASSURANCE

CF 5: Feedback information on the adequacy of controls is gathered, opportunities for improving the definition and planning of work are identified and implemented, line and independent oversight is conducted and, if necessary, regulatory enforcement actions occur.

SCE 3: Competent, robust, periodic and independent oversight is an essential source of feedback that verifies expectations are being met and identifies opportunities for improvement. Performance assurance activities verify whether standards and requirements are being met. Performance assurance through conscious, directed, independent reviews at all levels brings fresh insights and observations to be considered for safety and performance improvement.

Primary Mechanisms	Primary Responsibilities/Maintained By
BOP-006-002, *NNSA Employee Concerns Program*	All/NA-1
OST Policy 1.15A, *Surveys and Management Reviews*	POIO/POIO
OST Policy 1.16A, *External Inspections, Assessments, Reviews and Audits*	POIO/POIO
OST Policy 1.17B, *Performance Assurance Program* (PAP)	All/POIO
OST Policy 1.18B, *Self-Assessment Program* and SOP 1.00.03, *Conduct of Self-Assessments*	OMO & OS/POPD
OST Policy 1.19A, *Independent Investigation*	POIO/POIO
OST Policy 1.27A, *Convoy Operations Assessments and Surveys*	POIO/POIO
OST Policy 1.38, *Conduct of Staff Assistance Visits*	OTL & OS/POPD
OST Policy 7.10, *IRC* (draft) and OST SOP 2.00.03, *Injury/Illness Reporting* (draft)	ADA/ESHB

Primary Mechanisms	Primary Responsibilities/Maintained By
OST SOP 7.00.02, *OST Occurrence Reporting and Processing System*	ESHB/ESHB
OST SOP 7.00.07, *Safety Award Program*	All/ESHB
OST SOP 7.00.08, *Hazard/Concern Reporting Program* (draft)	All/ESHB

OST receives and performs assessments[7] at all levels of the organization. Regardless of assessment focus or method, the expectation is that:

- Individuals are trained to perform assessments.
- Individuals are knowledgeable in the topical area being assessed or accompanied by a knowledgeable subject matter advisor.
- Results are documented and communicated.
- Deficiencies are analyzed to determine the root cause.
- Corrective actions address the root cause.

OST performance and compliance is assessed at all levels of the organization and by internal and external organizations:

- External
    - Federal Aviation Administration
    - Inspector General
    - Government Accountability Office
    - NNSA (NA-10 – Chief of Defense Nuclear Safety, ES&H Senior Technical Advisor)
    - DOE-HQ (Health Safety and Security, Cyber Security, Emergency Management, Aviation Safety)
- Internal Independent (POIO)
    - Investigations (POIO)
    - Management Assessments and Surveys
    - Convoy Operations
- Self Assessment (Division/Command Directors)
- Staff Assist Visits (Subject Matter Advisors)

5.10.1 External Assessments and Evaluations
OST is externally reviewed by outside agencies (as listed above). The ADA has assigned POIO as the single-point-of-contact to ensure these assessments are coordinated appropriately within OST. The primary mechanism for coordination of external assessments is OST Policy 1.16A, *External Inspections, Assessments, Reviews and Audits.*

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[7] The term "assessment" encompasses audits, inspections, reviews, surveys, and evaluations.

5.10.2 Independent Investigation

The ADA has assigned responsibility for independent investigations to POIO. Independent investigations focus on "fact finding" subsequent to an abnormal event or occurrence. The objective is to ensure management is provided timely information regarding the circumstances of an event such that compensatory measures can be effected. The primary mechanism for these investigations is OST Policy 1.19A, *Independent Investigation.*

5.10.3 Internal Independent Assessments

OST Policy 1.15A, *Surveys and Management Reviews* is the primary mechanism for performing internal independent evaluations of OST programs and facilities. POIO has primary responsibility for performing these evaluations. Topical areas include safeguards and security, cyber security, convoy operations, aviation, emergency management, environment, safety and health, and business operations. The survey process focuses on facility and shipment security requirements; management reviews are conducted for all other topical areas. The ADA may request POIO to do a "for cause" review or a special focus review contingent on performance.

5.10.4 Convoy Operations Assessments and Surveys

Convoy assessments and surveys may be overt or covert. The objective is to ensure the overall integrity of the TSS. These assessments focus on Federal Agent capability (qualification, performance, compliance, readiness) and organizational controls (convoy operation processes and procedures and equipment). The ADA has assigned responsibility for these assessments to POIO; the primary mechanism for conducting these assessments is OST Policy 1.27A, *Convoy Operations Assessments and Surveys.*

5.10.5 Self-Assessments

OST Division/Command Directors are responsible for identifying programs, projects, and activities that require assessment. Schedules for these assessments are prepared and submitted to POPD annually. Primary mechanisms for performing self-assessments include, OST Policy 1.18B, *Self-Assessment Program* and OST SOP 1.00.03, *Conduct of Self-Assessments.*

5.10.6 Other Feedback and Improvement Mechanisms

OST has developed internal mechanisms to ensure issues, events and/or concerns are identified, analyzed, and resolved. Some mechanisms are directive-driven, such as Unusual Occurrence Reporting (SOP 7.00.02, *OST Occurrence Reporting and Processing System)* and injury/illness investigations [OST Policy 7.10, *IRC* (draft) and OST SOP 2.00.03, *Injury/Illness Reporting* (draft)]; while others are designed to promote worker participation [OST SOP 7.00.07, *Safety Award Program* and

OST SOP 7.00.08, *Hazard/Concern Reporting Program (draft)].*

In addition to these mechanisms, OST has a chartered Safety Committee. The OST Safety Committee is comprised of federal and contractor employees whose function is primarily safety or whose job area has significant safety impacts (such as munitions specialists). The OST Safety Committee provides safety-specific expertise to deal with a wide range of topics; actions assigned are tracked to completion. The OST Safety Committee meets quarterly.

5.10.7 Tracking Mechanisms

OST uses electronic database systems for tracking of corrective actions and issues. Findings and related corrective actions are entered into either:

- Safeguards and Security Information Management System Deficiency Tracking System (DOE-HQ)
- Corrective Action Tracking (DOE-HQ)
- Computerized Accident/Incident Reporting System (DOE-HQ)
- OST Deficiency Tracking System (OST Internal)
- Suspension/Action Tracking (OST Internal)

Data entry into these systems is contingent on the source of the assessment data and requirements.

6.0 ISM EFFECTIVENESS AND CHANGE CONTROL

6.1 PERFORMANCE MEASURES

Performance measures are used to track progress and monitor achievement of management objectives. Some measures are level-of-effort, while others have target achievement rates. The following table outlines the primary performance measures used by OST.

Performance Measure	Periodicity	Reporting Organization
Level of Effort Performance Metrics		
ISM Effectiveness review is completed documented and transmitted to NA-10.	Annual	ESHB
QA-5 is reviewed and updated.	Annual	POIO
The OST Worker Protection Program is reviewed and updated.	Bi-Annual	ESHB
USQ report is generated and issued.	Annual	ESHB
DSA document is reviewed and updated.	Annual	ESHB
Safety Committee meetings are held.	Quarterly	ESHB
IRC meetings are scheduled and held. Results are documented/tracked.	Quarterly	ADA/XO ESHB/HRRB

Performance Measure	Periodicity	Reporting Organization
Individual Performance Plans and IDPs are documented and completed.	Annual	OTL
Measurable Performance Goals		
Objective: USQD are processed prior to changes to equipment/operations. Measure: % of monthly cradograms issued requiring latent USQDs. Target: 0%	Monthly	ESHB/STSA
Objective: Self-Assessments are completed and documented as scheduled. Measure: # of self-assessments completed/documented compared to those scheduled. Target: 90%	Quarterly	POPD
Objective: OST maintains an appropriate level of resources to perform secure transportation in support of the NNSA mission. Measure: % of efficiency maintained during mission weeks. Target: 80%	Monthly	OMO
Objective: Identified personnel achieve and maintain required Technical Qualifications (TQP). Measure: % per TQP individual completed Target: 90%	Annual	STSA
Objective: OST staff completes Leadership Training. Measure: % of completion by Level/Job Category (1 & 2) Target: 100%	Semi-Annual	OTL

Performance Measure	Periodicity	Reporting Organization
Objective: Injuries/Illnesses rates are reduced to as low as reasonably achievable. Measures: • Days Away and Restricted/Transfer Rate • Total Recordable Case Rate • Lost Workday Case Rate Target: 5% reduction per annum over a 5-year period.	Quarterly	ESHB, HRRB, & Injury Council
Objective: Individuals are responsible for participating in/obtaining hazard reviews and understanding controls. Measures: • % of Procurement Requisitions received with appropriate reviews/approvals. • % of required Quality Reviews completed for QA Level I C2C Projects Target: 100%	Quarterly	RBMD & POIO
Objective: Mission essential equipment is maintained. Measures: • % of scheduled maintenance for conveyances (vehicles and aircraft) • % of scheduled maintenance for firearms • % inspections completed (ammunition) ammunition • % scheduled changeout of time-dependent munitions and equipment Target: 100%	Quarterly	ETSD, POAO & OTL
Objective: Accountability for mission equipment is maintained. Measure: # of missing accountable items to overall total Target: 100%	Annual	OTL

Performance Measure	Periodicity	Reporting Organization
Objective: Training/Exercise activity hazards are identified, analyzed, and controlled. Measures: # of days over milestone target (Milestone targets are specified in the Training SOP) Target: Last milestone met 60 days prior to Training/Exercise activity	Quarterly	OTL

OST is in the initial stages of developing other metrics that may provide better or additional insight (such as those associated with operational efficiency, PAP and the Training Playbook). In addition, OST has requested assistance from the NA-1 Environment, Safety and Health Senior Technical Advisor to determine applicability of NA-1 SD 226.1A, *NNSA Line Oversight and Contractor Assurance System SD* requirements/performance measures. Section 5.0 and 6.0 of this document will be updated to reflect this determination.

6.2 CHANGE CONTROL

SSEMD has the primary responsibility for developing, improving, maintaining, and facilitating implementation of this document. ESHB facilitates an annual review of this document in accordance with NA-1 SD 450.4-1. Results of this review are forwarded to the NA-1 Environment, Safety and Health Senior Technical Advisor. Changes to this document will be processed in accordance with the following:

- Minor changes (such as organizational name changes, transfer of functions to other OST organizations, supporting document revisions, typographical and aesthetic changes, and minor changes in work processes) may be made with internal review and approval and will be tracked in a change log associated with this document.

- Significant changes (such as mission expansion, new or significantly modified requirements, external/internal major organizational restructuring) require the ADA approval and submittal to NA-10 for re-verification.